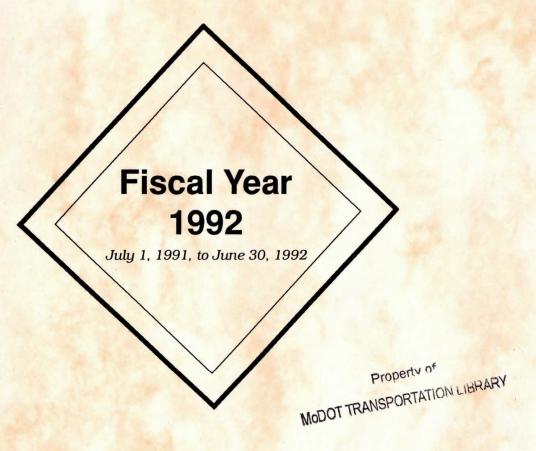
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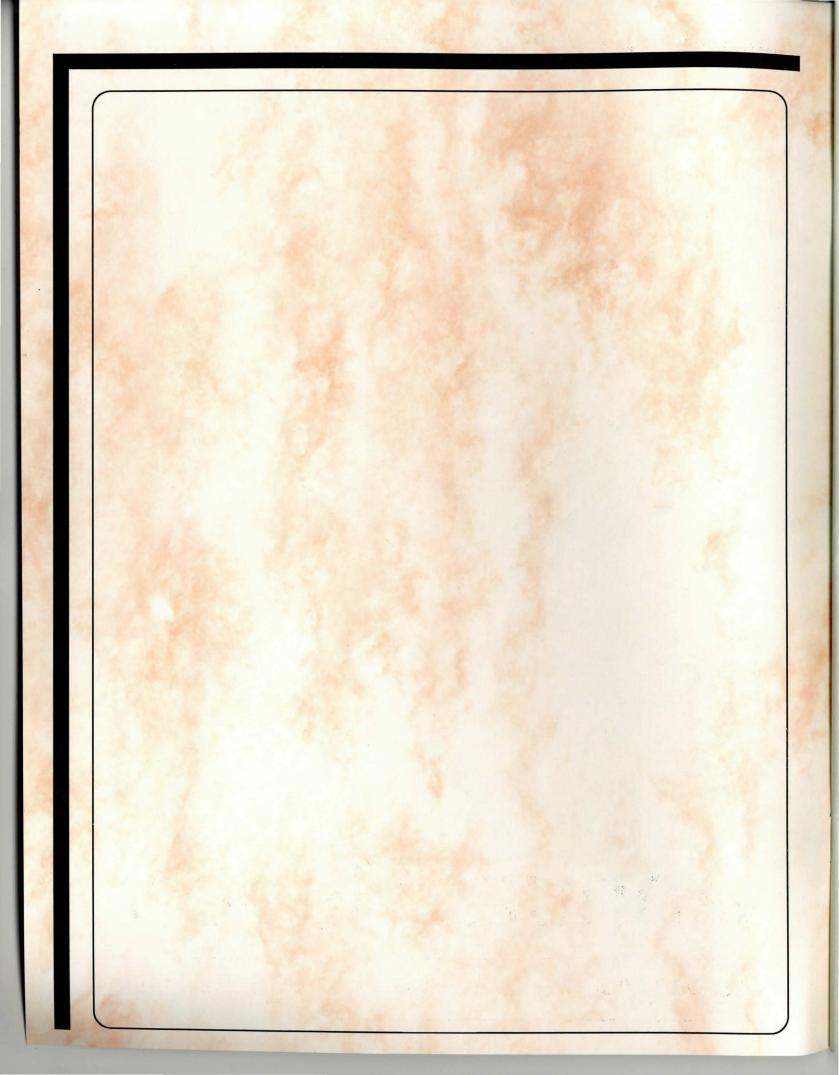
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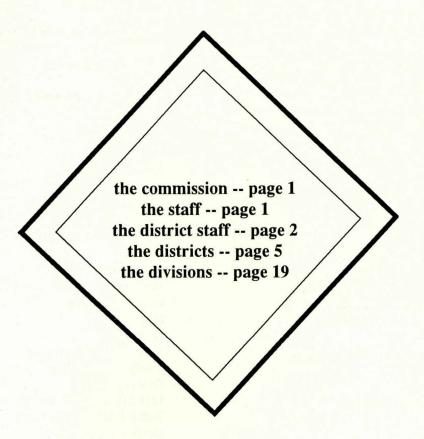


Annual Report

Missouri Highway and Transportation Department



contents



the commission

The Missouri Highway and Transportation Commission is a six-member. bipartisan governing body for the Missouri Highway and Transportation Department. The governor with the Senate's consent appoints members to staggered, sixyear terms on the commission. No more than three commissioners may be of the same political party.

The commission appoints the chief engineer, chief counsel and commission secretary. The chief engineer with commission approval appoints all other appointments.

Missouri Highway and Transportation Commissioners ending fiscal year 1992

Harry T. Morley

Chairman

Carol Williamson

Member

John L. Oliver

Member

Thomas John Barklage

Member

James W. Gamble

Member

Thomas M. Boland

Member

the staff

Missouri Highway and Transportation Department officials ending fiscal year 1992

Wayne Muri

Chief Engineer

Walt Vandelicht

Assistant Chief Engineer

Frank Carroll

Assistant to the Chief Engineer

Design

Joe Mickes

Assistant to the Chief Engineer

Operations

Ray McCray

Assistant to the Chief Engineer

Administrative Services

Rich Tiemeyer

Chief Counsel

Mari Ann Winters

Commission Secretary

Al Laffoon

Division Engineer

Bridge

Gary Chullino

Division Engineer

Construction

Bob Sfreddo

Division Engineer

Design

Jiggs Miner

Director

Equipment and Procurement

Bob Drusch

Director

Fiscal Services

Roy Lilley

Director

Information Systems

Terry Porterfield

Director

Internal Review, Audit and Systems

Dave Snider

Division Engineer

Maintenance and Traffic

Bill Trimm

Division Engineer

Materials and Research

Rich Millard

Director

Personnel

Phil Jackson

Division Engineer

Planning

Sue Muck

Director

Public Affairs

Art Taylor

Director

Right of Way

Mel Sundermeyer

Director

Transportation

District 1

Northwest Area 3602 N. Belt Highway P.O. Box 287 St. Joseph, Mo. 64502 (816) 387-2350

District 2

North Central Area U.S. Route 63 P.O. Box 8 Macon, Mo. 63552 (816) 385-3176

District 3

Northeast Area Highway 61 South P.O. Box 1067 Hannibal, Mo. 63401 (314) 248-2490

District 4

Kansas City Area 5117 East 31st Street Kansas City, Mo. 64128 (816) 921-7104

District 5

Central Area 1511 Missouri Blvd. P.O. Box 718 Jefferson City, Mo. 65102 (314) 751-3322

District 6

St. Louis Area 329 S. Kirkwood Road Kirkwood, Mo. 63122 (314) 966-3800

District 7

Southwest Area 410 Range Line Road P.O. Box 1445 Joplin, Mo. 64802 (417) 629-3090

District 8

Springfield Area 3025 East Kearney M.O. Box 868 Springfield, Mo. 65801 (417) 866-3576

District 9

South Central Area U.S. Route 63 North P.O. Box 220 Willow Springs, Mo. 65793 (417) 469-3134

District 10

Southeast Area P.O. Box 160 Sikeston, Mo. 63801 (314) 472-5333

Missouri Highway and Transportation Department district engineers ending fiscal year 1992

Garry Chegwidden

Northwest Area District Engineer

Jim Jackson

North Central Area District Engineer

Dick Jones

Northeast Area
District Engineer

Bob Chappell

Kansas City Area District Engineer

Jim Toft

Central Area
District Engineer

J.T. Yarnell

St. Louis Area District Engineer

Ken Stalcup

Southwest Area District Engineer

Willis Graven

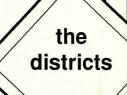
Springfield Area District Engineer

Royce Fugate

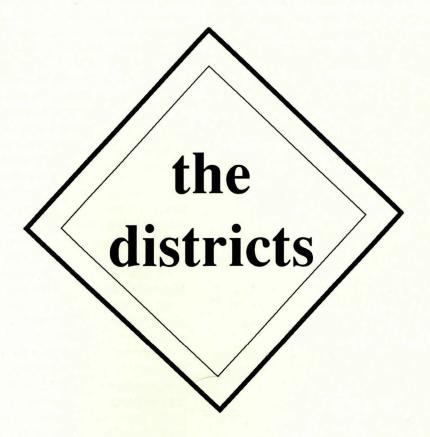
South Central Area District Engineer

Freeman McCullah

Southeast Area District Engineer







District 1 St. Joseph

District 1 consists of 12 counties in northwest Missouri; the district office is in St. Joseph. There are about 485 employees working in seven departments.

The Maintenance and Traffic Department is divided into 10 areas, which are comprised of 32 subareas across the district. These subareas performed routine maintenance work and specialized work such as replacing cross-road

pipes and repairing bridge decks.

Construction was completed on 4,000-ton salt domes at Cameron and Bethany. Maintenance operations were moved to the new Gallatin Maintenance Building, four miles west of Gallatin. Work is progressing in obtaining a new lot for the North St. Joseph Maintenance Building.

Temporary traffic signals were constructed in Cameron at Route 36 and Griffin Road. As of June 30, 1992, 413 groups were enrolled in the Adopt-A-Highway program.

Route 71 through southern Maryville and the overpass on Route 169 over Interstate 29 were restriped from four lanes to three after traffic studies of the area.

District 1 has three resident engineer offices. They are in Maryville, St. Joseph and Cameron. Major construction projects included the following:

Interstate 29, Andrew County -- resurfacing; Interstate 35, Daviess County — resurfacing; Route 59, Buchanan County — resurfacing, bridge rehabilitation;

Route 169, Buchanan County — relocation of route, bridge replacement;

Route 116, Caldwell County — resurfacing; Route 69, Daviess/DeKalb counties resurfacing;

Route 36, DeKalb County — construct interchange at Route 69; and

Route B, Andrew County — resurfacing, bridge rehabilitation.

There were nine projects awarded in District 1 totaling \$14,524,895 in construction costs. In addition, 11 county road bridges with bids totaling \$2,215,443 were let under the Off System Program monitored by the district liaison engineer.

The Design Department has four design squads and one survey party that develop

design plans for upcoming projects. Other design responsibilities include liaison between counties and MHTD, coordination of utility work with contract projects, dissemination of information to the public on upcoming projects and operation and maintenance of the district computer systems.

The Equipment and Procurement Department maintains the district's equipment including 45 passenger vehicles, 40 pickups, 200 trucks (mainly dump trucks) and 280 pieces of off-road equipment. This fleet equals an investment of about \$10.9 million. The district spends about \$.7 million yearly for parts. Operating costs for the 12-county area are about \$2 million yearly.

The Materials and Research Department samples and tests all materials used in the maintenance and construction of roadways. This work determines compliance with the department's specifications and insures only high-quality products are used. Materials and Research personnel have various areas of responsibility that include the following:

(1) designing and monitoring Portland cement concrete and asphaltic concrete mixtures;

(2) sub-surface investigations required for highway and bridge design;

(3) investigating and monitoring the performance of new materials and/or products for use in the department; and

(4) sampling and testing for the Federal Highway Administration (FHWA).

Aggregate quality control is a large part of this department's duties. During fiscal year 1992, materials personnel inspected 1,280,836 tons of various types of aggregate.

The Right of Way Department has five employees. This department acquires right of way for projects, maintenance lots or other department projects. It also handles the sale of excess property for the district.

he Fiscal Services Department's duties include payroll, time sheets, overdimension permits and inventories and processing commercial invoices. Fiscal Services personnel handle the following: typing, processing incoming and outgoing mail, personnel matters, insurance, maintenance of the district office and garage, the writing of the district report for and distribution of the <u>Highway and Transportation News</u>, appointments, phone calls, expense checks and salary checks.

The District 1 Highway Credit Union, workers' compensation claims, and insurance

and retirement matters are this department's responsibilities.

District 1 conducts cardiopulmonary resuscitation/first-aid classes and commercial drivers' training for employees. The district holds service award dinners each year and preretirment seminars every three years. The district also held a meeting for retirees to inform them of department changes and hap-

Jistrict 2 oversees highway activities in north central Missouri. The 14 counties of District 2 are Adair, Carroll, Chariton, Grundy, Howard, Linn, Livingston, Macon, Mercer, Putnam, Randolph, Saline, Schuyler and Sullivan. These 14 counties contain more than 8,000 square miles. Within this 8,000 square miles are 3,746 miles of highway - 24 miles of interstate, 733 miles of primary and 2,989 miles of supplementary roads.

Eleven maintenance areas with 32 buildings maintain this large road system. In addition, there are five special crews in two locations to handle tasks such as signing, striping and bridge and pavement repair. District 2 has 314 maintenance employees.

The Design Department has 30 employees, which are headquartered at the district office in Macon. The district office also has the Right of Way Department with eight employees, the Fiscal Services Department with 11 employees and the Equipment and Procurement Department with 29 employees, which includes 15 field mechanics assigned to the district's maintenance buildings.

Of the 11 Materials and Research Department employees in District 2, two are at Marshall. Their main duty is to inspect precast bridge beams at the Quinn precast plant. Most precast bridge beams for Missouri highway projects originate here. The two District 2 inspectors make sure the beams are built according to department plans and specifica-

Three resident engineers working from four offices manage the district's construction work. Major construction projects include the following:

*four-laning Route 63 south of Macon;

*relocating a portion of U.S. 65 in southern Mercer County;

*replacement of the bridge over the Soo Line railroad on U.S. 65 south of Chillicothe; and

penings.

District 1 has had 15 employees selected as department Employee of the Month awardwinners.

The district also has many activities such as the annual Employees' Association softball tournament to raise money for a needy family at Christmas, bowling tournaments and steak dinners for employees who are retiring.

*many smaller bridge and resurfacing jobs.

There are 54 construction employees. In all, District 2 has 450 employees.

District 2 has an District 2 active and proud Macon history of dedicated and involved employees. One of the earliest MHTD Employees of the Month was Maintenance Superintendent Norman Mears, who is retired. Mears was also selected a state Employee of the Month. Mears was instrumental in achieving the district's safety record, which has been the best in the state for many years.

The district encourages civic and service groups to participate in the Adopt-A-Highway Program. As of June 30, 1992, there were 332 groups adopting 641 miles of highway. One adoption is for a section of 10 miles or longer; the average adopted section is nearly two miles. District employees have spent many hours explaining the program at meetings and making adoption presentations.

District 3 Hannibal

District 3, head-quartered at Hannibal, encompasses the area of Audrain, Clark, Knox, Lewis, Lincoln, Marion, Monroe, Montgomery, Pike, Ralls, Scotland, Shelby and Warren counties. Within its jurisdiction, District 3 has 3,609 miles of two-lane highways. In all,

403 people work at the Hannibal district. The district has 10 subareas, 38 maintenance buildings and two resident engineer offices at Hannibal and Mexico.

The district's construction projects include the following:

*Route E in Lincoln County, \$427,316 — bridge rehabilitation and asphalt resurfacing from east of Route UU to Route 61; 5.173 miles; completed 8/22/91.

*Route W in Marion County, \$205,260 — shaping shoulders, guardrail, pavement repair and asphalt resurfacing from Route 61 to Route N in Hannibal; completed 8/16/91.

*Route 15 in Shelby County, \$778,028 — bridge rehabilitation and asphalt resurfacing from Knox County line to Route 168 in Shelbyville; 12.034 miles; completed 8/2/91.

*Route 54 in Audrain County, \$2,369,057 — constructing a bridge and concrete pavement from Callaway County line north to Route D; 3.722 miles; completed 4/29/92.

*Route 61 Business Loop in Pike County, \$370,187 — cold milling, bridge rehabilitation and asphalt resurfacing from Route 61 to Route 161 in Bowling Green; 2.828 miles; completed 11/20/91.

*Route MM, Marion County, \$548,155 -- bridge rehabilitation and asphalt resurfacing from Route 36 east to Route 61 (in Hannibal); 5.2 miles; completed 9/27/91.

*Route 25, Monroe County, \$1,176,117 -- drainage, pavement repair and asphalt resurfacing from Madison to Route 154; 10 miles; completed 10/15/91.

*Route V, Montgomery County, \$404,664 -- grading, drainage, bridge replacement and asphalt pavement 1.8 miles east of Route 161 at Big Wolf Creek; 0.5 miles; 80 percent complete.

*Route 61, Ralls County, \$1,389,226 -- grading, bridge replacement and asphalt resurfacing from Route Y to south of Bear Creek; 0.6 miles; completed 8/6/91.

*Route 54, Audrain County, \$6,904,190 --

grading, drainage and bridges for the Mexico bypass (paving not included); 4.7 miles; 75 percent complete.

*Route 61, Clark County, \$2,940,610 -- bridge replacements, grading, drainage and asphalt pavement at Fox River and one mile west of Route 136; 1.3 miles; 25 percent complete.

Route 54, Audrain County, \$1,256,558 -- asphalt resurfacing and bridge rehabilitation from Route 22 to Route 19 South Junction; 11.4 miles: 5 percent complete.

The District 3 Materials and Research Department is responsible for the inspection of material from 35 quarries, eight sand producers, one mineral-filler producer, three cement plants and two asphalt cement terminals. In 1992, 1,327,951 tons of aggregate, 39,571 tons of cement and 5,815,153 tons of asphalt were inspected.

Inspection was also provided at three precast facilities and two prestress/precast plants where temporary barrier curb, drop inlets, manholes, reinforced concrete pipe, earth panels and prestressed bridge girders and deck panels are produced.

A total of 924 identification numbers were assigned in fiscal year 1992. This includes general material samples submitted to MHTD's central laboratory for further testing, trial mix material and material reports. Soil survey reports were completed for five construction projects.

District 3's territory has some unique features. For example, in District 3 the scenic Great River Road follows Route 79 from Hannibal to Old Monroe, and the Lewis and Clark Trail follows Route 94 in Warren and Montgomery counties. The Mark Twain Lake and Clarence Cannon Dam are major recreational attractions in District 3.

The district office and garage buildings were modified, and the Computer-Aided Drafting and Design (CADD) system was implemented fully.

As of June 30, 1992, District 3 had 408 groups enrolled in Missouri's Adopt-A-Highway program.

District 4 oversees the highway and transportation system for west central Missouri. It is headquartered in Kansas City at 5117 East 31st Street.

The district is made up of eight counties: Cass, Clay, Henry, Jackson, Johnson, Lafayette, Platte and Ray. The district has a total of 744 employees -- 37 administrative personnel, 121 construction personnel, 83 design employees, 32 equipment and procurement employees, nine legal employees, 405 maintenance and traffic personnel, 33 materials and research employees, three employees from personnel, two employees from risk management, one planning employee and 18 right of way employees.

The Maintenance and traffic Department maintains 2,733 miles — 202 miles of interstate, 569 miles of primary and 1,696 miles of supplementary roads and 265 miles of outer roads. There are 34 maintenance buildings under the supervision of nine area supervisors and six special crew buildings under the supervision of nine special maintenance supervisors.

Maintenance and Traffic administered a total of 78 Adopt-A-Highway permits in fiscal year 1992.

The Construction Department has seven resident engineer offices. The major project under way is the Bruce R. Watkins Drive. The project's estimated cost is \$200 million; it is scheduled to be completed in 2002. The project's total length is 10 miles.

The Design Department has eight squads preparing plans for roadways. This department also prepares all agreements and administers various programs with county and city governments. District 4's Design Department is working with the city of Kansas City to develop a special project at the Bruce R. Watkins Drive (formerly known as the South Midtown Roadway). There will be extensive landscaping, aesthetically enhanced bridges and a jogging trail. This a a good example of what city/state cooperation can achieve.

Right of way valued at nearly \$598,657 was acquired during the fiscal year, and relocation benefits amounting to \$149,321.86 were paid to parties affected by district projects.

The materials and research staff inspects materials used in the district's construction and maintenance programs to assure that quality materials are used. Inspection of materials for other districts is also provided.

The district counsel's office is comprised of a district counsel, a senior assistant coun-

sel, three assistant counsels, one paralegal and three legal secretaries. The office is responsible for preparing, filing and defending cases on behalf of the Highway and Transportation Commission in the 20 county circuit courts in districts 4 and 1.

The district counsel's office manages approximately 160 court cases each fiscal year. The types of cases handled by the district counsel's office include condemnation, workers' compensation, general liability, fleet vehicle liability, property damage, inverse condemnation and various miscellaneous cases.

The district has 696 pieces of equipment that are maintained by 17 field, five shop mechanics and two mechanic helpers.

he Personnel and Fiscal Services Departments offer support services for the district.

District 4's American Red Cross Standard First-Aid Program trained an additional 90 employees and recertified another 244 employees in Adult CPR.

Service awards honored 77 employees with 1,470 total years of service.

District personnel remodeled half of the lower parking garage providing two conference rooms and offices for personnel, the urban liaison engineer, survey crews and two design squads.

District 4 Kansas City

District 5 Jefferson City

District 5 has eight departments including fiscal services, legal, equipment and procurement, maintenance and traffic, construction, design, right of way and materials and research. The district has approximately 515 employees. There are 11 maintenance areas, 43 sub-area buildings,

The district covers a land area of 7,787 square miles and encompasses the 13 counties of Benton, Boone, Callaway, Cole, Camden, Cooper, Gasconade, Maries, Miller, Moniteau, Morgan, Osage and Pettis including the Lake of the Ozarks area and the cities of Sedalia, Columbia and Jefferson City. The district oversees 78 interstate miles, 819 miles of primary system highways and 2,558 miles of supplementary system roads.

struction project offices.

six special crews and four con-

The major construction projects in District 5 are as follows:

*Route 63, Boone County -- grading, paving and bridge over Rocky Fork Creek for dual lane 0.3 mile north of Rocky fork Creek to Wagon Trail Road.

*Route 163, Boone County -- continue widening to dual lane for 0.5 mile in Columbia

*Route 50, Cole County -- revising signals and geometrics at the Truman Boulevard interchange in Jefferson City;

*Route 63, Cole County -- access elimination at Cherry Street in Jefferson City;

*Route 63, Cole County -- provide left-turn lane and rebuild crossover at City View Drive in Jefferson City.

*Interstate 70, Cooper County -- raise the grade and replace bridges at Chouteau Creek and Martins Branch.

*Route 42, Maries County -- relocate 0.5 mile of Route 42 and replace bridge over Little Tavern Creek.

*Route 42, Miller County -- relocate 0.4 mile of Route 42 and replace bridge over Tavern Creek.

*Route 50, Moniteau County -- resurface from Morgan County line east 1.3 miles;

*Route 50, Morgan County -- resurface 4 miles Route 50 from approximately 2 miles

west of Route D to Moniteau County line.

As of June 30, 1992, District 5's Adopt-A-Highway program had 635 adoptions with more than 996 miles adopted in the district's 13 counties.

District 6, which is headquartered in Kirkwood, has established the following mission statement: "Our mission is to provide the St. Louis metro area with a quality transportation network meeting today's demands and tomorrow's expectations." The district, which employs more than 800 people, is committed to achieving this mission. With the introduction of the total quality management philosophy into the department, the district has found many new ways to work together effectively and efficiently. Many employees are involved in the process as trainers, facilitators and team members.

Besides trying to work together better internally, the district is attempting to improve its relationship with the public. Many department employees have spent hours speaking with high school students, area businesses, governmental agencies and service organizations in the metropolitan area.

District 6 is responsible for maintaining 1,457 miles of roadway in St. Charles, St. Louis, Jefferson and Franklin counties and the city of St. Louis.

The Maintenance and Traffic Department includes 24 maintenance buildings supervised by nine area supervisors. An additional eight supervisors oversee operations such as signals, lighting, striping, signing, bridge, landscape and special repairs. Besides the district's miles of roadway, maintenance and traffic employees are responsible for 656 signal installations.

The department also oversees the Adopt-a-Highway program. As of June 30, 1992, more than 800 groups had enrolled in the program. The district, with its three landscape crews, has received many compliments on recent efforts to enhance area landscaping.

The construction department has 10 resident engineer offices staffed by approximately 180 engineers and technicians. During the past year, this District 6 department has been busy with several major projects that should be completed during fiscal year '93.

One of these projects is the new Route 115 highway and bridge from Interstate 270 in St. Louis County to Route 94 in St. Charles County. All remaining projects required to open Route 115 to Route 94 in St. Charles County were put under contract. The project will be complete in fiscal year 1993.

District 6 held a road opening ceremony for Route 21 in Jefferson County on Nov. 7, 1991. Gov. Ashcroft and other dignitaries attended and were first to officially drive on the newly opened lanes.

The fiscal year also saw much progress on the new interchange at Route 40 and Interstate 270 in west St. Louis County. The project is slated for a late 1993 completion.

The design department has 12 squad lead- ers and more than 60 engineers and technicians.

District 6 was very proud to have Eual "Butch" Heacox, outdoor adversting inspector, named as Employee of the Month.

District 6
St. Louis

District 7 Joplin

District 7, headquartered in Joplin, has 423 full-time employees: 20 administrative, 37 construction, 26 equipment and procurement, 279 maintenance and traffic, nine materials and research, eight right of way and 44 design. Approximately 28 temporary employees and 49 summer students were employed during 1992.

The district has 37 maintenance buildings. There are three resident engineer offices located at Neosho, Carthage and Nevada.

The district maintains 3,331 miles of highway; this includes 60 miles of interstate, 729 miles of primary and 2,542 miles of supplementary roads.

The district striping crew completed more than 6,300 miles of striping this year. They added no-passing zones and edgeline to many routes to improve safety. The striping crew operates with waterbased acrylic paint and high-heat paint in two stripers. The district maintains more than 42,000 signs with each inspected annually.

Permit inspectors issued 1,118 permits. Of the 1,118, 65 were for commercial entrances, 258 for private entrances and 775 for excavation permits.

District 7, the southwest district, encompasses the 11 counties of Barry, Barton, Bates, Cedar, Dade, Jasper, Lawrence, McDonald, Newton, St. Clair and Vernon.

Major construction projects in District 7 during the period of July 1, 1991, to June 30, 1992, included the following:

*MAF-37-1(10) in Barry County -- grading and concrete pavement on route 37 from Seligman to the Arkansas state line.

*F.A.-832(6) in McDonald County -- replacing a bridge on Route 90.

*M-MABRM-3202(708) in Jasper County -grading and removing a bridge on Seventh Street in Joplin.

*F.A.F.-71-3(33) in Bates County -- resurfacing on Route 71.

As of June 30, 1992, the district had 463 Adopt-A-Highway groups covering 749 miles for litter pickup, mowing and beautification and two Growing Together projects.

The district Materials Department inspects for compliance with the specification all the

materials used in constructing and maintaining the highways. This includes more than 850,000 tons of aggregate, 160,000 tons of cement and 25,000,000 gallons of asphalt. Other major items inspected include plain and epoxy-coated reinforcing steel and dowel bars, galvanizing of steel signal and lighting poles, sodium and calcium chloride, concrete pipe, oil, grease and antifreeze. They also perform soils surveys, condition surveys and bridge foundation investigations to use in highway and bridge design.

District 8 encompasses a 12-county area with 3,648 miles of state highways. The district boundaries extend north including Hickory County, which includes the Pomme De Terre Lake area. To the east are Laclede, Webster, Wright and Douglas counties. They include the cities of Lebanon, Mountain Grove and Ava. To the south, District 8 runs to the Arkansas state line. This area includes the Ozark Mountain region, home of Branson and the lakes area.

The Ozark Mountain Region is southwest Missouri's leading tourist attraction with the Branson area expecting more than 4.5 million tourists this year. District 8's main metropolitan area is Springfield with a population of approximately 150,000 people.

District 8 has 462 employees with most employees working from 39 maintenance buildings throughout the district and project offices in Springfield and Buffalo.

The district office appearance continues to stand out because of the building maintenance and roadside enhancement crews' efforts.

Building Maintenance Crew Member Howard Thieman was named MHTD's May 1992 Employee of the Month. He was also named the State Employee of the Month.

In the Springfield area, construction continues on the James River Freeway.

Other major construction projects are as follows:

- *Interstate 44 Greene County;
- *Interstate 44 Laclede/Webster counties;
- *Route 65 Dallas County;
- *Route 73 Dallas County;
- *Route 744 Greene County;
- *Route 76 Stone County;
- *Route 5 Laclede County;
- *Route 83 Polk County;
- *Route F Taney County; and
- *Business Route 60 Wright County.

The department announced it would build a loop around Branson called the Ozark Mountain Highroad. The Design Department prepared plans for several projects for the James River Freeway, Route 65 in Dallas County, and other projects including bridge replacements and resurfacing.

The Adopt-A-Highway program continues to be a great success in the Ozarks. As of June 30, 1992, 629 groups had adopted a portion of District 8 highway through the program.

The district has four Growing Together projects. Growing Together is a cooperative

beautification program between the department and state and local governments, civic groups or others.

District 8
Springfield

/ District 9 Willow Springs District 9, headquartered in Willow Springs, encompasses the 13-county region of Carter,

Crawford, Dent, Howell,
Iron, Oregon, Pulaski, Phelps,
Ripley, Reynolds, Shannon,
Texas and Washington counties.
The district's Maintenance and

Traffic Department has an authorized staff of 11 office and 286 field personnel. They maintain the largest district in the state, which includes 3,726 miles of roadway. Of this, 78.5 miles are interstate; 1,048 miles are primary routes, and 2,599 miles are supplementary routes. These routes are maintained from 36 maintenance and three special crew buildings, which are divided into 11 sub-areas.

The Adopt-A-Highway program has become increasingly popular in the District 9 region. As of June 30, 1992, 310 groups had signed their adoption papers in District 9.

The Construction Department in District 9 has 46 employees. In 1992, the following major projects were completed:

*widening Business Route 63 in West Plains;

*bridge replacement on Route 21 at Lesterville;

*shoulder widening with resurfacing on Route 101 in Howell and Ozark counties;

*signal replacement and widening on Route 17 in Waynesville;

*bridge rehabilitation and widening on Route V over Interstate 44; and

*various ashpalt overlays throughout the district.

The Right of Way Department's nine employees have been in the real estate business during fiscal year 1992. They acquired right of way for highway construction totaling \$3,547,255. This included 99 parcels — 51 by negotiation settlement and 48 by condemnation or 52 percent by negotiation and 48 percent by condemnation.

Payments totaling \$137,420 were made this year under the Relocation Assistance and Payment Program to assist displaced families in relocating. During fiscal year 1992, 34 relocation claims were processed and paid. Also, appraisals were obtained on 75 parcels.

The District 9 Design Department has 27 employees. Currently they are designing 68 projects. Major projects include the upgrading of Route 60 from Willow Springs east in several locations including a new bridge over the Current River at Van Buren. Route 63 is being upgraded near West Plains.

The Fiscal Services Department has eight office personnel and two maintenance personnel. They handle payment of payrolls and commercial and equipment invoices. They're also responsible for daily and monthly reports from the maintenance buildings and construction offices. Further responsibilities include life and health insurance, workers' compensation, credit union, building maintenance and district correspondence.

The District 9 Equipment Division has 32 employees: 18 field mechanics and helpers, 11 shop personnel and three stockroom employees. In the 13-county district, they take care of about 546 units including 45 cars, 44 pickups and carryalls, 195 trucks, 87 tractors, 43 loaders, 39 distributors, 48 motorgraders and 45 other units. The stockroom personnel oversee a parts and supplies inventory of \$324,776 and have an average monthly sale of \$31,000.

The Materials and Research Department has 10 employees. They inspect 17 quarries, 112 gravel sources and 12 ready-mix plants. In fiscal year 1992, they inspected 451,852 tons of aggregate including 329,122 tons of crushed stone; 82,505 tons of gravel; 37,970 tons of sand and 2,255 tons of porphyry.

Materials personnel inspected 1,615,911 gallons of emulsified asphalt. Many materials such as calcium chloride, sodium chloride, paint, corrugated metal pipe, reinforced concrete pipe and others were inspected.

District 9 has had three Employees of the Month. Bob Woodring, district highway design engineer, was the October 1983 honored employee. Steve Hutchison, field mechanic, was the May 1986 Employee of the Month. Dave Smith, senior highway designer, was the November 1991 Employee of the Month.

The district office employees are enjoying the new district office building. Nestled in the midst of the scenic Ozarks, the exterior is constructed of natural rock.

District 10 encompasses the counties of Scott, New Madrid, Mississippi, Pemiscot, Dunklin, Butler, Wayne, Stoddard, Bollinger, Cape Girardeau, Madison, Perry, Ste. Genevieve and St. Francois. District 10 has the Naylor Maintenance Building in Ripley County, which is in District 9. The 14-county district in southeast Missouri covers 7,984 square miles and has 3,858 road miles.

The district acquired 12 parcels of land, approximately 2.5 acres, behind the district office. The land has been cleared, graveled and fenced. The Equipment and Procurement Department is now using it.

District 10 has approximately 534 full-time salaried employees. During fiscal year 1992, 10 employees retired; 44 permanent employees were hired. One employee transferred from the district. Five employees resigned. No employees were released, and two employees died. The district hired 34 college students and 49 seasonal maintenance workers.

The District 10 Highway and Transportation Employees' Credit Union, managed by the district personnel services agent, serves the financial needs of the state Highway Patrol and Highway and Transportation Department members. Total membership was 974 with total assets of \$5,082,104. During the past fiscal year, 384 loans totaling \$1,349,750.06 were processed.

District fiscal services employees processed about 8,038 checks to suppliers; checked and extended totals on more than 11,500 daily crew reports: added more than 613 items to the tool inventory; took inventory at 36 maintenance buildings, five resident engineer offices and the district office; and verified that 3,608 pieces of equipment were in service and tagged properly. In all, 613 new items were inventoried. About 135 were transferred, and about 450 items were deleted from the inventory. Also, material, petroleum and capital investment inventory were taken at all maintenance buildings. Other items included processing commercial invoices. physical inventories and usage reports for 757,000 gallons of petroleum products.

Fiscal services employees verify time for personnel including full time, temporary, seasonal and overtime.

This department also processed 105 property damage claims, 62 auto liability claims and 103 new workers' compensation claims. Fiscal Services issued about 844 overdimension permits from June 30, 1991, to July 1, 1992.

The Right of Way Department Annex is District 10 located about 1/2 mile from the district Sikeston office. It has 10 employees. This department acquired 87 parcels with 83 of those negotiated and four condemned. There were 169 staff appraisals performed during this period. The Cape Girardeau bridge project is divided into three segments and required much of the department's time and service. Also the district processed right of way relinquishments on many excess parcels of land and made several appraisals for changes of access.

The Materials and Research Department inspects the materials used to construct and maintain District 10 highways. Materials had 13 full-time and three summer employees during fiscal year 1992.

Materials has many projects where employees are performing independent assurance sampling and federal-aid sampling and testing. They verify that the job control or acceptance inspector follows proper test procedures and that the equipment being used for acceptance testing is working correctly. This testing is performed only on federal-aid projects.

The district soils and geology technologist completed 10 soil surveys, sampled 13 quarries and investigated numerous slides.

The Materials and Research Department is helping on a statewide research project called Life Expectancy Determination of Corrugated Metal and Reinforced Concrete Pipe. The project will compare these two types of roadway crossroad drainage pipe.

Materials and research personnel have inspected various materials for the district Maintenance Department such as glass beads, brush and weed killers, grader and maintainer blades, sodium and calcium chloride for ice control, paint, anti-freeze, gear oil and grease, hydraulic fluid, lubricating oil, asphalt and various aggregates.

n District 10, personnel inspected the following quantities: various aggregates — 1,319,182 tons; cement — 42,163 tons; asphalt — 7,988,122 gallons; black #747,098 and epoxy-coated #617,489 reinforcing steel — 1,501,045 pounds; corrugated metal pipe — 14,225 linear feet; reinforced concrete pipe

— 1,577 linear feet; plastic joint compound — 81,778 pounds; reinforced concrete I-girders — 126; reinforced double tee-girders — 67; reinforced bridge deck planks — 2,730; precast concrete median barriers - 1,458.5 linear feet; guard rail and fencing — 33,000 linear feet; fertilizer — 1,644,366 pounds; paint — 675 gallons; welded wire fabric — 1,242,674 square feet; and calibration of concrete R/M plants — 25.

The Design Department has 50 employees with five design squads and two field survey crews. Nineteen projects totaling 119 miles were let for contract during fiscal year 1992 at a cost of \$30,000,000.

Projects are on all systems, and costs range from \$200,000 to more than \$6,735,757. Eleven bridges were replaced or modified significantly.

Not included in the above tabulation are plans for 185 miles of maintenance contract leveling course projects costing approximately \$2,000,000.

he District Design Department has reviewed the federal-aid, off-system bridge program including 20 structures amounting to about \$2,661,000. Also six federal-aid urban (FAU) projects totalling \$2,046,000 have been processed during fiscal year 1992.

The Construction Department has five resident engineer offices and 64 employees. Sixteen employees work at Flat River, 14 at Jackson, 12 at Sikeston, 14 at Poplar Bluff and seven at Kennett. There is one district final plans and reports processor. District construction has annexed from the district office and now shares a building with district materials.

Sixty-one projects were active during fiscal year 1992. They totaled approximately \$35,402,646.45. Thirty-six of those projects were contract leveling projects.

Some major projects are as follows:

*Route 25, Cape Girardeau County, \$3,614,015.13;

*I-55, Cape County Rest Area, \$2,395,814.06;

*Route W, Cape Girardeau counties, \$1,311,160.44;

*Route 60, New Madrid County, \$1,561,275.51;

*Route 62, New Madrid County, \$1,231,973.19;

*Route 61, Scott and New Madrid counties, \$4,299,615.70;

*Route 21, Washington County,

\$1,078,604.85.

During fiscal year '92, the Construction Department had the following task forces and quality circles: structures, bituminous, resident engineers, incidental construction, construction reports and submittals.

The Maintenance and Traffic Department has 12 areas, 36 sub-areas and special crews in Sikeston with about 360 employees.

The district ranks first in highway miles and third in land area. District 10 has 198 miles of interstate, 742 miles of primary and 2,918 miles of secondary roads.

The following is the breakdown by county of the 1,366 state highway system bridges maintained by District 10: Bollinger — 61; Mississippi — 62; Ste. Genevieve — 64; Butler — 109; New Madrid — 142; Scott — 97; Cape Girardeau — 140; Pemiscot — 118; Stoddard — 161; Dunklin — 107; Perry — 50; Wayne — 117; Madison — 60; and St. Francois — 78.

In the past year, the district resurfaced 189 miles of highway with one-inch, machine-laid hot mix leveling course. Maintenance forces resurfaced about 146 miles of road with a cold mix leveling course. District 10 used 105,000 yards of mix to patch and make routine surface repairs. It also mowed 40,000 acres of right of way.

District 10 administers the Adopt-A-Highway program in its region. As of June 30, 1992, the district had 406 groups in the program.

Maintenance and traffic employees installed two new signals and replaced three controllers. There were 34 new mobile radios and seven replacements added to the fleet.

Snow and ice removal operations were below normal because of a mild winter. Roadway flooding and other weather- and nature-related repairs were about normal. Concrete deck repair increased this fiscal year.

he District 10 Equipment and Procurement Department maintains and repairs more than 674 pieces of equipment. Besides normal equipment maintenance, there have been several equipment modifications implemented. The district purchased 26 new trucks, eight new tractor mowers, two extra heavy-duty tractors, three four-wheel drive loaders, five distributor trucks, 18 pickup trucks, 15 new passenger cars and one street-seeper during fiscal year 1992.

Three stockroom employees in the procurement section issue local purchase orders,

order parts and supplies on requisitions or job tickets, check commercial invoices against purchase orders and code items for payment. They post inventory records and make sure they balance monthly, charge labor from job tickets, prepare garage invoices and keep district tire, battery, gas, oil and other records.

As part of the department's concern for the health and welfare of its employees, District 10 has participated in an in-house cardiopulmonary resuscitation (CPR) and first-aid training session sponsored by the American Red Cross. This district has nine instructors to train employees.



Bridge Division

Urban monies.

The Missouri Highway and Transportation Department Bridge Division is responsible for the design, estimating and special provisions, rating and shop inspection of the state highway system bridges. The division also reviews bridge replacement plans funded through Bridge Replacement Off-System and Federal Aid

During fiscal year 1992, the division completed 110 new bridge and retaining wall designs for letting. Of this number, 97 were designed for major system routes and 13 for supplementary routes.

The total length of new structures contracted during the fiscal year was 23,588 feet at a cost of \$51,050,064. Of these amounts, 1,523 feet were contracted at a cost of \$2,459,334 for the supplementary system.

In addition to the new structure designs, 75 designs were contracted for repairing, widening or extending for 14,383 feet of existing bridges at a cost of \$16,663,690.

teel fabrication inspectors made 384 trips to 24 fabrication shops to inspect bridge steel, and 314 sets of shop drawings were processed.

The division was involved in liaison with consulting engineering firms on 10 bridge projects, which included two major bridges.

Besides structure design, the division rated county and municipally owned bridges as part of the Federal Highway Administration Bridge Replacement and Rehabilitation Program.

Division personnel reviewed programming eligibility for 58 proposed bridge replacement projects, 71 preliminary layouts and 131 sets of plans, specifications and estimates for bridge structures on the Federal Off-System Bridge Replacement and Rehabilitation and Federal Aid Urban Programs.

he Chief Counsel's Office has its headquarters in Jefferson City and five district counsel offices located in Kansas City, Jefferson City, Kirkwood, Springfield and Sikeston. There are 35 attorneys and 32 support staff for a total staff of 67.

As of June 30, 1992, the Chief Counsel's Office had a caseload of 660 cases and 451 Highway and Transportation Commission and other agency administrative proceedings for a total of 1,111 files open.

The following summary of activity by the office covers the fiscal year July 1, 1991, to June 30, 1992:

Condemnation Cases

Disposition was effected in 144 cases, and 146 exceptions were filed. There were 48 jury trials reported. The sum of \$4,386,104.27 was collected on final judgments where a return from the commissioners' award was due the commission.

Administrative Hearings

Outdoor Advertising — There were 17 hearings conducted involving 25 signs.

Utility Relocation — No hearings were held. Relocation Assistance — There were two hearings held.

Highway Beautification Cases

Outdoor Advertising — 14 cases were opened; four were closed.

Junkyard Cases — Three cases were opened; seven were closed.

Risk Management Cases

General Liability — Forty-eight cases were filed against the commission, and 36 were closed. There were eight jury trials reported.

Fleet Vehicle Liability — Sixteen cases were filed against the commission, and four were closed. There was one jury trial reported.

Property Damage — No cases were filed by the commission; seven were closed.

Inverse Condemnation — Six cases were filed against the commission, and seven were closed.

Workers' Compensation Cases — There were 197 claims filed with the Missouri Division of Workers' Compensation, and 81 claims were closed.

Workers' Compensation Subrogation Cases

— Three cases were filed by the commission, and three were closed.

Contractor

Cases — No cases were filed against the commission, and seven cases were closed.

Miscellaneous Cases — Five cases were filed against the commission, and 19 were closed.

Chief

Counsel's

Office

Discrimination Cases — Two cases were filed against the commission, and none were closed.

Retirement Board Cases — No cases were filed against the commission, and none were closed.

Medical Insurance Plan Cases —

No cases were filed against the commission, and none were closed.

Annexation Cases — Two cases were filed against the commission, and four were closed.

Other Agency Claims

Employment Security Appeals -- Four claims were filed against the commission, and none were closed.

Equal Employment Opportunity claims — Six claims were filed against the commission, and six were closed.

Missouri Commission on Human Rights claims — Five claims were filed against the commission, and three were closed.

EPA/DNR claims — There were no claims filed against the commission, and none were closed.

Miscellaneous — Numerous contracts were prepared and reviewed, legislative bills drafted and reviewed, and legal opinions rendered.

Construction Division

The Missouri Highway and Transportation Department's (MHTD) Construction Division administers construction contracts. After the Highway and Transportation Commission awards construction work, MHTD issues a notice to proceed to each successful contractor and

establishes contract finances. The division's personnel inspect each project so the department keeps aware of the construction progress.

During fiscal year 1992, construction work continued on interstate routes 70 and 270; Route 115 and Route 40 in the St. Louis area; Route 71 in the Kansas City area; Route 54 in the Cole/Callaway/Audrain county area; Route 60 in the Greene County area; and Route 7 in the Cass County area. Construction also continued on Route 60 Current River Bridge in Van Buren and the Route 115 Missouri River bridges between St. Charles and St. Louis counties.

Interstate system contracts included upgrading existing dual facilities to interstate standards and implementing the latest safety features.

The division administers the Off-System Bridge Repair Program and the Federal Aid Urban Program. These programs have increased during the fiscal year.

Primary and supplementary system contracts

involved new construction, widening and resurfacing projects and bridge replacements. This year the contract level course program was doubled as a result of increased funding. The contracts included rural and urban construction; the projects are financed with a combination of federal aid and state funds.

The division provides supportive services for disadvantaged-owned firms. MHTD continues to seek out and certify minority and women contractors to help meet the goals of the disadvantaged enterprise program. Bidders on construction projects are obligated to take affirmative action in using disadvantaged business enterprises. Through affirmative action efforts, \$31,403,675 in state and federally assisted contracts and subcontracts were awarded to disadvantaged business enterprises during fiscal year 1992.

The division also participates with contractors in a value engineering program, which helps produce an equal or better product at less cost.

Active projects

System federal-aid funds	Awarded in fiscal year '91	Awarded in fiscal year '92	Total
Interstate	10	4	14
Primary	36	14	50
Supplemental	6	3	9
Off-System			
Subtotal	52	21	73
100 Percent state funds			
Interstate	0	0	0
Primary	4	47	51
Supplementary	2	64	66
Subtotal	6	111	117
Total projects	58	132	190

he Design Division prepares the Missouri Highway and Transportation Department's (MHTD) roadway improvement studies. The division also plans and handles the letting of highway project contracts.

MHTD holds meetings and formal hearings to explain the need and purpose of highway improvements and to obtain public comment. Coordination with local, state and federal agencies is required.

During fiscal year 1992, the division obtained tentative location approval on eight highway improvements holding 12 formal location and design public hearings and several public meetings.

As part of its duties, the Design Division uses aerial photography to conduct photogrammetric surveys early in a project. Field surveys supplement this work and give basic information for plan development.

The third phase of the Computer-Aided Design and Drafting (CADD) system installation was completed during fiscal year '92. The third allowed all district design offices to start production of computer-drafted contract plans. At the end of the fiscal year, about 20 percent of the contract plans were being produced on the system. Workstations were distributed to 85 percent of the designers and to 30 percent of the design technicians.

The CADD training and support staff provided 40 hours of instruction to 12 new users and 24 hours of advanced training to 150 users. Training in the use of new surveying techniques was started in districts 7 and 9 by providing 24 hours of instruction to 12 surveyors. The new procedures are providing increased efficiency for most of the design and surveying tasks.

In April, the commission approved a proposal to begin Phase IV of CADD implementation. This proposal will provide workstations to most of the designers and technicians in Design. The workstations for the drafting functions will be changed over from mainframe computer terminals to distributed processors on a wide-area network.

The Design Division administers the department's Value Engineering (VE) Program. Through the program, department personnel apply the value engineering discipline on selected projects, items, procedures and processes to reduce cost and improve productivity.

During 1992, MHTD completed VE studies for three construction projects and one study on procedures, operations and standards. These studies resulted in an estimated

savings of \$5.2 million.
The department realized an additional savings of \$140,000 from recommendations submitted by contractors on active construction projects.

tain Highroad at Branson.

active construction projects.

The Design Division assesses environmental impacts for each project. This includes air quality evaluation, noise studies and cultural, cial and economic considerations. The division finished cultural resource survey studies on 51 projects and reviewed more in-house. Extensive environmental work was conducted for three major projects requiring Environmental Impact Statements. These projects are the Page Avenue extension near St. Louis, Route 71 south of Interstate 44 to Arkansas and the Ozark Moun-

Design

Division

Before letting highway improvements, the department acquires right of way, makes arrangements for utility adjustments and obtains permits and licenses from state and federal agencies. The division obtained approval of detail plans for right of way acquisition on 68 projects.

The Disadvantaged Business Enterprise (DBE) program lets businesses owned and controlled by socially and economically disadvantaged individuals or women participate in contracts or subcontracts financed in whole or in part with federal funds. DBE firm participation during fiscal year 1992 was \$34.2 million.

The Design Division also administers several federal-aid programs that provide funding for cities, counties and rail-highway crossing safety improvements.

The Surface Transporation Program -- Urban (STPU) provides federal funding for streets and highway construction in cities and urban areas with populations between 5,000 and 200,000. About \$8.5 million was obligated in Missouri cities for this program. The STPU funds generally finance 80 percent of the cost of eligible projects with local jurisdictions providing 20 percent matching funds. During fiscal year 1992, 19 projects were approved for construction under this program.

In addition to these funds, urbanized areas with populations greater than 200,000 are provided federal funds for use on projects located in the urbanized area. During 1992, 15 projects were approved for consturction in those

areas. These projects required an obligation of approximately \$20.6 million.

The STPU Bridge Replacement Program financed 10 bridge replacement projects in urban areas, at a cost of about \$9.0 million. Bridge replacement funds finance 80 percent of the cost with local agencies responsible for the remaining 20 percent.

The Off-System Bridge Rehabilitation and Replacement Program provides federal funds for bridge repair and replacement on county roads not on a federal-aid system. About \$18.6 million was obligated for projects qualifying for this program with counties providing 20 percent matching funds. During the fiscal year,54

projects were approved for preliminary engineering charges; 89 were approved for construction, and 91 projects were placed under contract by the counties.

During the fiscal year, 11 bid openings were held. Projects totaling \$343.6 million were placed under contract. An average of 3.5 bids were received per project.

Prices increased during the past year with the Missouri average composition cost index being 112 compared to base year 1987. The 1992 cost index reflects a 15.1 percent increase compared with the 1991 cost index of 97.3.

The following table provides a summary of projects awarded between July 1, 1991, and June 30, 1992.

1992 Report	Awards (in million \$)	Miles	Projects
Interstate System	63.6	78.7	22
Primary System	107.5	295.7	68
Supplementary System and			
Maintenance Work	194.8	2,541.7	474
Off-System (County Bridges)	18.6		89
STP Urban (Off State System)	<u>29.1</u>	-	<u>34</u>
	413.6	2,916.1	687

Equipment and Procurement Division

The Equipment and
Procurement Division
procures and maintains
an equipment fleet
that efficiently and
effectively lets the
Missouri Highway and
Transportation Department (MHTD) carry out its
functions. As of June 30,
1992, the division was maintaining 6,064 units such as passenger cars, trucks, carryalls, trac-

tors, mowers, motorgraders and others.

The department needed 4,236,594 gallons of gasoline and 3,886,357 gallons of diesel fuel to operate the fleet this fiscal year. MHTD also used 9,432 gallons of antifreeze, 90,252 gallons of lubricating oil, 43,781 gallons of hydraulic oil and 61,121 pounds of multipurpose gear oil and lithium grease. The department contracted for tires and tubes costing \$837,360.01; tire chains costing \$16,227; and shop equipment, parts and supplies totaling \$13,182,095.65 during fiscal year 1992.

This division also provides the tools,

supplies and materials required in the department's operations. In an effort to give better service to the user divisions, MHTD is using annual contracts for many items instead of periodic purchases.

During fiscal year 1992, the department continued purchasing batteries, pneumatic tires and tubes for direct shipment from the supplier to each district office. This saved in freight costs.

To save money various supplies and equipment are produced at the Headquarters' Garage when labor is available. The Equipment and Procurement Division continued to haul freight and internal mail with department vehicles. The internal freight system in districts 9 and 10 has worked well and will be expanded. This has reduced the number of trips into the district stockroom by field crews.

Materials purchased for highway maintenance during fiscal year '92 are as follows:

Various Types of Asphalt	36,281,430	gallons
Gravel/Stone/Chat	932,000	tons
Paint	688,413	gallons
Reflectorizing Spheres	4,861,438	pounds
Sodium Chloride	176,430	tons
Calcium Chloride	2,341	tons
Agricultural Seed	71,035	pounds
Treated Wood Sign Posts	20,540	each
Steel Sign Posts	14,400	each
Grader Blades	381,430	pounds

he Fiscal Services Division includes two major functions: accounting and risk management. General accounting and expenditure control are a direct responsibility of this division. The division maintains all department financial records including the accounting systems for the Missouri Highway and Transportation Employees' and Highway Patrol Retirement System; the Missouri Highway and Transportation Department and Missouri State Highway Patrol Medical and Life Insurance Plan; and the workers' compensation and fleet vehicle liability self-insurance plans.

Accounting responsibilities also include federal billings and collections, legislative and internal budget preparation and all payment processing.

The division processed 211,600 checks during fiscal year 1992. Disbursements for highway and transportation functions equaled \$848,242,418.29. Other state departments disbursements from highway funds equaled \$118,192,977.95. Total disbursements from all funds equaled \$966,435,396.24.

The department is self-insured for workers' compensation and automobile liability. A contracted administrator processes the workers' compensation claims. During this past fiscal year, there were 1,144 workers' compensation cases. And the workers' compensation subrogation recovery unit collected \$366,625.98 involving 71 claims. In-house claims staff processed 683 automobile liability cases. Although not technically self-insured, all general liability claims are processed within the Risk Management office of the Fiscal Services Division. A total of 906 general liability claims were processed during the past fiscal year.

This division also administers the regula-

tions and policies of the
Highway and Transportation
Department and State
Highway Patrol Medical
and Life Insurance
Plan, which includes
the State Furnished
Life Insurance Plan and
the Optional Life Insurance Plan. As of June 30,
1992, there were 10,575 health
insurance plans, 8,050 statefurnished life insurance plans and

From July 1, 1991, through June 30, 1992, there were 126,454 health claim payments with \$22,310,685.52 paid in benefits. During the same period, there were 20 life claims under the state-furnished plan and 32 life claims under the optional life plan with \$295,920 and \$1,321,359 in death benefits to survivors.

8,253 optional life insurance plans in force.

During the fiscal year, the property damage recovery unit collected \$858,346.21 involving 1,351 claims.

The department's safety program is also part of the Risk Management office of the Fiscal Services Division. The department's safety coordinator supervises the safety program. Safety officers are located in the Kansas City, St. Louis and Springfield districts.

The Fiscal Services Division is also responsible for the Highway Employee and Highway Patrol Retirement System accounting and payroll records. From July 1, 1991, through June 30, 1992, the division processed 43,347 retirement system benefit payments totaling \$37,875,970.33.

Internal
Review,
Audit and
Systems
Division

The Internal Review,
Audit and Systems
Division has three areas of responsibility in the Missouri
Highway and Transportation Department's
(MHTD) cost accounting systems. The first area encompasses operational reviews at the division and district level in such stivities as construction, right of way, y engineering, administration, finan-

activities as construction, right of way, preliminary engineering, administration, financial management, information systems, planning and transportation. These reviews determine if division and district operations comply

with published department procedures and state and federal regulations including the economy and efficiency of operations. This insures the integrity of developed and incurred costs.

The division's second area of responsibility involves auditing final invoices for utility and railroad relocations, federal-aid urban (FAU) projects, bridge replacement off-systems (BRO) projects, transportation grants and miscellaneous billings to the department.

The third area includes developing, revising and maintaining the department's accounting systems and written operating and coding procedures.

Audit totals from July 1, 1991, to June 30, 1992, were as follows:

Utilities	49	\$4,856,151.32
Railroads	91	3,568,856.38
Federal Aid Urban	21	26,823,778.38
Bridge Replacement Off-System	113	14,702,272.02
Miscellaneous	15	4,623,240.10
Pre-Audit Contract Reviews	112	12.881,701.32
	401	\$67,455,999.52

Information Systems Division The Information Systems Division provides mainframe and

microcomputing
facilities, application
programming, data
base facilities, data entry
and support for personal
computer and office automation for the Missouri Highway
and Transportation Department
(MHTD). The division also oversees
MHTD's telephone communications

systems including voice and data.

In its third phase of implementing Computer Aided Drafting and Design (CADD), the department installed design workstations in MHTD districts 1, 2, 7, 9 and 10. This completed the delivery of CADD drafting facilities to all districts and the Main Office Bridge Division.

The number of personal computers in the Main Office and district offices continued to grow substantially to approximately 1,500. All new personal computers acquired for MHTD staff were connected to existing local area

networks (LANs), which provide common services for applications, data and print distribution.

A major effort to use Geographic Information Systems (GIS) was begun by collecting coordinate data for creating an electronic map of the state of Missouri. Once the U.S. geological survey data was acquired, it was refined with digitization techniques to show details of divided highways, secondary roads, route markings and other topological features. After the final base map is completed, programs can be written to display transportation data geographically, which will provide benefits in planning and maintenance activities and in public meetings.

Information Systems coordinated efforts with the Planning Division to create standardized relational databases for highway reference data used throughout the department. This allowed all divisions and districts to use the same highway reference points for their activities.

Relational database tables were also created to accommodate the large amount of data generated from MHTD's new mobile pave-

ment sensing vehicle, which records the condition of highway surfaces as it travels along a route. The data is then summarized and analyzed with existing computer applications to determine the characteristics of a road and its need for resurfacing or maintenance work.

Application programming received a new emphasis with the hiring of an assistant director for software and the addition of a programming group to support MHTD's operational divisions. A program was implemented to let overweight and overdimension permits on Missouri roads to be issued in other states. This effort was coordinated with several states to make the permit request process easier on the trucking industry. Several tracking pro-

grams for administrative information were implemented along with many enhancements to existing applications.

MHTD has 1,500 computer users with access to network, electronic mail and mainframe services. More than 12,000 jobs per month are processed through the mainframe.

The quality of materials for **Materials** construction and mainteand nance of the Research state highway system is the Division primary responsibility of the Materials and Research Division. Materials and Research employees in each of the 10 districts coordinate field inspections for the sampling, testing and approving of

tions for the sampling, testing and approving of materials. Employees at the central laboratory in Jefferson City test, evaluate and approve materials used in Missouri's highways and bridges. This division's tasks include material specifications preparation; geotechnical investigations; pavement type selection; soil, bridge and pavement condition surveys; aggregate and general quality materials assurance; Portland cement and asphaltic concrete mixtures design and control; special investigations and research.

The central lab is an approved and accredited facility is inspected regularly by national inspection agencies such as the Cement and Concrete Reference Laboratory (CCRL) and the American Association of State Highway and Transportation Officials Materials Reference Laboratory (AMRL). AMRL inspected the laboratory in July and September.

Many materials routinely tested in the field also are tested in the laboratory to insure statewide uniform testing procedures. The laboratory also tests those materials requiring special equipment and procedures. Efforts to automate laboratory tests through digital data acquisition continues.

The division continues to develop and monitor new asphaltic concrete mixtures designed to help prevent premature rutting and add increased life. Stone mastic asphalt (SMA) has now been constructed on two projects. SMA is a special-purpose surface pavement mixture, which is rut resistant and based on European technology.

The development of bituminous mixtures to incorporate rubber from scrap tires continues. A test section was placed on Interstate 70, Boone County, in August 1990 followed by one complete overlay project in September 1991. A second test section also was constructed in September 1991 using ground rubber in a porous bituminous mixture with the expected benefits of less noise and less surface spray during rain. The porous bituminous mixture also was the department's first effort to include a contractor warranty for the work. A total of 813,500 pounds of crumb rubber was used in bituminous mixtures in September 1991.

New product evaluation is an important division function. The need to make quick pavement and bridge repairs has generated "fast-setting" concrete patching materials

"fast-setting" concrete patching materials and overlay systems, which division personnel evaluate. Three projects with an asphaltic overlay containing reclaimed ground rubber tires have been constructed and are being monitored for performance.

This division also obtains, tests and interprets the subsurface information needed to design highways and bridges. Drilling equipment and crews from the division's headquarters in Jefferson City obtain the data. Crews and equipment are dispatched throughout the state.

Personnel also investigate various geotechnical matters including foundation stability and settlement of embankments; slide corrections; subgrade and base stabilization; environmental studies; bridge and wall foundations; sinks and mine subsidence; and the use of fly ash and other waste products. Special investigative techniques include electrical resistivity and seismic; down-hole photography and sonar; and field permeability testing.

The department strongly supports the Strategic Highway Research Program (SHRP). SHRP has approved 19 test pavement sections in Missouri. MHTD also has submitted for SHRP's approval many special construction and maintenance effectiveness test sections. Materials and Research is committed to implementing new SHRP-developed technology.

A department representative serves on the SHRP Advisory Committee for Concrete and Structures. The department has established an MHTD/SHRP Coordinating Committee to inform employees about SHRP's work.

The Materials and Research Division has a representative on the technical research committee, which reviews proposed and completed research work and solicits problem statements on research from MHTD employees.

The division is continually improving its operations through Quality Improvement training, automation and internal technical training.

From July 1, 1991, through June 30, 1992, a total of 22,730 samples were tested, including those of an experimental or investigative nature.

Commonly used materials inspected, tested and approved during fiscal year 1992:

Aggregates	12,375,127 tons
Cement	529,203 tons
Reinforcing Steel	22,250 tons
Culvert Pipe	
Corrugated Metal	154,851 linear feet
Reinforced Concrete	164,479 linear feet
Vitrified Clay	802 linear feet
Joints - Bituminous, Fiber	213,119 linear feet
Joints - Rubber	18,418 square feet
Joints - Metal	392,778 linear feet
Guard Rail	159,836 linear feet
Posts, Metal	50,935 posts
Precast Units	
Median Barriers	2,696 units
Concrete Bridge Beams	1,015 units
Concrete Inlets	960 units
Concrete Manholes	335 units
Piling and Round Posts	4,401 linear feet
Bituminous Material	
Cutback	13,216,962 gallons
Penetration	29,265 gallons
Emulsified	24,601,864 gallons
Asphalt Cement	51,988,394 gallons
Paint	1,015,008 gallons

he Maintenance and Traffic Division is responsible for the maintenance and traffic operations of the 32,441-mile state highway system. The division also maintains 20 rest areas along the interstate system, 68 roadside parks on the primary and supplementary highways and 387,000 acres of highway right of way.

Since 1974, the department has built commuter parking lots along many high-traffic highways to conserve energy. There are about 90 parking lots with approximately 5,600

parking spaces.

One of the division's major expenses is maintaining low-type bituminous surfaced roads. In calendar year 1992, the department surfaced 1,826 miles of low-type roadway under the maintenance leveling course program. In addition, 2,306 miles were resurfaced by contract under the contract leveling course program, and 36 miles of roadway were surfaced under the contract sealcoat program.

In 1986, the department began installing liquid calcium chloride or liquid magnesium chloride dispensing units at maintenance facilities along high-volume interstate and primary routes. Liquids are applied to salt and other abrasives to make these materials more efficient in removing snow and ice from the roadway. In fiscal year 1992, the department added 22 locations under the program.

Contracts were awarded for six maintenance buildings during fiscal 1992. Contracts for eight salt storage domes were awarded.

The division is in the middle of a five-year program to remove underground fuel tanks because a small leak in the underground fuel tank could gradually contaminate the soil, groundwater and environment. In lieu of the underground tanks, the division is placing above-ground tanks within above-ground concrete containments. The concrete containment will contain any spilled fuel. All underground tank removals will be completed by December 1993. Approximately 700 tanks have been removed at this time. The division is also improving its methods in handling and storing hazardous waste. At some locations salt domes are being used to totally contain salt in storage so the environment will not be harmed.

In 1988, the department, cooperating with the Department of Corrections and Human Resources, employed incarcerated personnel in maintenance activities. These crews perform labor-intensive duties such as landscape

planting and maintenance and erosion control.

control.

By using incarcerated people, the department benefits by having an economical labor pool complete duties that would be neglected. The incarcerated personnel benefit by participating in a typical work environment. The inmates are from minimum security institutions, have no history of escape and are within two years of release. We now have crews working in districts 1, 4, 5, 8 and 10 and the Highway Gardens.

Maintenance

Along with the University of Missouri-Columbia and Department of Agriculture, the division sponsored a one-day training program on pesticides. The program trains employees to properly use pesticides and will improve the safety and effectiveness of pesticide use on department right of way. This program began in 1987. More than 600 employees are certified.

During this fiscal year, Missourians showed much interest in the department's Adopt-A-Highway program. This program, introduced in 1987, increases public awareness of environmental problems along Missouri highways by letting the public adopt highway sections to mow, beautify or clean-up. By 1992, there were 5,468 adoptions covering about 8,382 miles of state highways. Most adoptions are for litter control, but more than 150 adoptions are for beautification plantings.

The public's desire to improve the appearance of highway right of way helped develop the department's Growing Together Program. Growing Together is a cooperative effort between the department, state and local governments and private groups to enhance the looks of state highways. MHTD and the departments of Conservation and Corrections and Human Resources help local agencies and groups in beautification projects such as landscaping interchanges and intersections. There are currently 27 projects.

In the Growing Together program, the groups can plant shrubs, trees, flowers and other greenery. Local city or county governments propose areas to be developed. After MHTD approves the area, the local government or civic group funds the project. The department helps with design and bidding. When possible,

incarcerated people plant trees, shrubs and flowers. The Conservation Department gives seedlings to plant along the beautification area borders. There are several active projects throughout the state.

which the permits issues overweight and overdimension permits through this division. The permits insure that vehicles exceeding the legal dimension and weight limits do not cause structural damage to bridges and pavements. There were 91,174 overdimension, overweight and overdimension/overweight special permits issued during the fiscal year. District offices issued 9,027 or 10 percent of the permits. Included in the total were 1,864 permits issued to governmental agencies or subdivisions at no charge.

Division personnel do routine inspections of all span-type bridges on the state highway system. Besides routine inspection, the hanger pin assembly unit on bridges is ultrasonically tested to detect pin failures every other year.

The division uses two under-bridge inspection units called "Snoopers." Both Snoopers performed fracture critical bridge member inspections and indepth inspections on approximately 800 bridges this past year. All submerged portions of bridges are inspected by the dive team at least once every five years.

A school to train off-system bridge inspectors was held in November 1992; 100 inspectors attended. Division repair crews completed structural repairs on 221 bridges, and division paint crews painted 114 bridges during fiscal year 1992.

Activities funded from 402 Program funds under 3+ Standards of the Missouri Highway and Safety Program and coordinated by the department are as follows.

Bridge Engineering Assistance Program — This program helps political subdivisions obtain information on the structural adequacy of bridges under their jurisdiction. Two consultants retained by the Highway and Transportation Commission perform these services. The consultants determine structural adequacy, establish posted weight limits and develop priorities for bridge repair or replacement. Structural adequacy reports and inventories were conducted on 99 bridges from October 1990 to September 1991 at an average cost of \$613 per bridge.

Traffic Engineering Assistance Program — This aids political subdivisions who have traffic engineering problems that need review but don't have personnel to do these reviews. Two consultants retained by the commission perform the service; they completed 15 studies in political subdivisions from October 1990 to September 1991. The average cost was \$4,905 per study.

A total of 61 new traffic signals were installed at intersections statewide. Twelve of the 61 intersections were signalized by permit, and 28 intersections were signalized by maintenance forces or maintenance contracts.

Contracts were let to expand the use of mobile radios in various divisions and district positions. The radio for the new District 7 office was relocated.

MHTD opened the new Headquarters Sign Shop May 1, 1988. Since its opening, more than 566,000 new signs have been made. MHTD's Reclamation Plant salvaged about 262,000 signs.

Sheltered workshop employees are used to reclaim button copy letters. This process saves time and money in sign production and provides the workshop with desirable duties. Since Nov. 20, 1990, it has resulted in a savings to the department of \$57,300.

In calendar year 1991, the department placed 88,630 miles of centerline, laneline and edgeline stripes, using approximately 791,000 gallons of paint. To complete the work, the department used 22 over-the-road stripers. The operation includes a nurse truck, attenuator trucks and a lead truck.

During the striping season, bulk paint storage facilities were started in Kansas City and Macon. These assemblies consist of two bulk paint tanks that can hold 10,000 gallons each of white and yellow paint. In 1992, the department will set up three more bulk paint operations in St. Joseph, Springfield and Sikeston.

In calendar year 1991, the department placed about 19,739 miles of no passing zones.

The division coded and placed in the accident data record system 70,640 accidents on the state highway system during the fiscal year 1992. The Missouri State Highway Patrol and about 565 city and county enforcement agencies provided the reports.

he division continued its 120/Medium Improvement Program in fiscal year 1992, investigated eight locations where more accidents than normal had been occurring and implemented corrective measures at the spots.

Maintenance and Traffic investigated 100 locations that had 20 or more accidents throughout a three-year period and evaluated countermeasures for possible federal funding under Federal Highway Safety Program. This division provided the Planning Division with 28 locations to be put on the Right of Way and Construction Program at an estimated cost of \$4.8 million.

The 43d Annual Traffic Conference was held April 27-29, 1992, in Columbia. County, city, state and federal government representatives attended this two-day conference on solving traffic problems. Before the conference, National Highway Institute personnel presented a workshop on "Using Engineering Studies to Diagnose Highway Safety Problems."

The program of monitoring peak period freeway traffic in the Kansas City and St. Louis areas was continued during 1992. The location and severity of congestion on about 170 miles of freeways was documented.

Low capital improvement projects have been or are being implemented. These included closing the ramps at Interstate 70 and

Material

Riverview in the St. Louis area has been completed.

A freeway incident management plan was developed for both Kansas City and St. Louis areas that resulted in the implementation of a Motorist Assist Program on segments of the interstates in both cities.

Consultant studies with 80 percent funding by the Federal Highway Administration is under way in St. Louis and one pending in Kansas City to study freeway management using IVHS (Intelligent Vehicle Highway System) technologies.

Amount used

Maintenance materials used during calendar year 1992:

		imiouni abou		
	Various Types of Asphalt	35,614,000	gallons	
	Various Types of Aggregate	1,178,400	tons	
	Sodium Chloride (winter 91-92)	141,351	tons	
	Calcium Chloride (winter 91-92)	2,026	tons	
	Liquid Calcium or			
	Magnesium Chloride (winter 91-92)	480,000	gallons	
	Seed	53,778	pounds	

Personnel Division

The Personnel Division provides assistance to the Missouri Highway and Transportation Department (MHTD) in matters such as employment; college recruiting; employee training and development; wage and salary matters; personnel policy; affirmative action administration; employee ations; and personnel records and

relations; and personnel records and statistics maintenance. Personnel professionals are located in the Main Office and most MHTD districts.

The division develops and implements programs to ensure that competent job applicants seek employment with the department, employees are properly trained and fair and productive working conditions exist.

The department is an equal opportunity employer and considers affirmative action a priority. The Personnel Division and MHTD's districts strive to attract qualified minority and female applicants. The division monitors Equal Employment Opportunity (EEO) progress and keeps the headquarters office and districts informed. The division also monitors requirements of Title VI of the Civil Rights Act of 1964 to ensure that disadvantaged and womenowned business enterprises may participate in state and federally assisted programs.

New employee orientation and training is conducted through the department's supervisors, the Personnel Division and outside specialists.

Employees may attend training conferences and seminars related to their work. MHTD's operational divisions provide technical skills training. The Personnel Division conducts and coordinates an integrated curriculum of supervisory and EEO training for all employees.

In January 1989 the department implemented a three-year Graduate Engineer Development Program for new civil engineers, which continues to be administered statewide. The program exposes the new engineer to the department's disciplines, policies, procedures and personnel in preparation for advancement. Each graduate engineer has a training plan for the first three years of employment.

MHTD has expanded its summer hire program to include summer internships for civil engineers. The internship program not only helps the department meet its peak season needs in the technician or para-professional areas but also lets students gain

experience and learn more about department careers. MHTD employs interns statewide in the various engineering divisions.

The department tries to maintain a positive work environment for high employee morale and motivation. All personnel transactions are reviewed to guarantee equal and uniform salary administration and policy application.

The department implemented a new job evaluation system July 1, 1989. The Personnel Division keeps MHTD's job specifications current by conducting approximately 100 job audits per year.

The division processed 305 claims for unemployment compensation during the fiscal year and obtained 19 denials out of 30 protested claims. The division did not protest 275 processed claims because the claimants were temporary employees who became unemployed through no fault of their own and were entitled to unemployment compensation.

The division maintains centralized personnel records. The personnel data is used for employee profile, employee trends and staffing needs analysis. Computer applications have improved personnel record-keeping.

The department had 6,167 salaried employees and 912 part-time and seasonal employees on June 30, 1992. The department hires temporary and emergency employees for such duties as snow removal.

The Personnel Division held pre-retirement seminars for headquarters employees and their spouses.

rom July 1, 1991, to June 30, 1992, the division processed 164 employees for retirement. Fifty were 55 to 59 years old with 30 or more years of service. Five were between the ages of 55 and 59 with 15 or more years of service, and two were between the age of 55 and 64 with 10 or more years of service. Also 78 employees between the ages of 60 and 64 with 15 or more years of service were processed, and six employees were 65 or older with four or more years of service.

Thirteen employees qualified for long-term disability and two qualified for normal disability. Eight vested members also elected to begin annuity benefits. The Highway Employees' and Highway Patrol Retirement System currently is paying benefits to 3,769 department retirees and survivors; 81 of these are long-term disabilities.

The average salaried MHTD employee has given almost 14 years of service to MHTD.

he Planning Division's efforts in fiscal year 1992 focused on planning for the state's future highway system. To do this, the division collected and maintained financial and roadway information, determined existing and future highway needs and developed planned improvements and financial programs to fulfill those needs.

The Long-Range Planning Section provided information to the state Legislature to develop a new funding package. The section identified a 15-Year Road and Bridge Program on Jan. 2, 1992. It also performed financial analyses to distribute funds for developing the fiscal year '93 Highway Right of Way and Construction Program and to make optimum use of funds in the letting process. The section performed many economic analyses for contracts, began the process of updating statewide flood data and monitored various items such as bridge condition, safety and construction prices.

The Programming Section prepared the 1993 Highway Right of Way and Construction Program that shows improvements scheduled for the next 15 years. The section also prepared monthly updates on the progress of Proposition A.

The comprehensive planning process continued in the state's six urban areas. This process requires cooperation between the department, local jurisdictions and metropolitan planning organizations. The process develops and updates multimodal, long-range plans and transportation improvement programs in the urban areas of Kansas City, St. Louis, Springfield, St. Joseph, Columbia and Joplin.

The Traffic Section made approximately 4,500 portable vehicle counts and collected continuous count data at 105 permanent sites on the state's 32,000 miles of highways in fiscal year 1992. Speed surveys to determine compliance with the 55 mph speed limit were conducted at 34 statistically selected locations throughout the state. Vehicle miles of travel increased 0.2 percent from 1990, making 1991 the 10th year in a row of record-increasing travel in Missouri.

Automatic vehicle classification data was collected at 100 sites, and trucks were weighed with weigh-in-motion equipment at 30 sites for department information. Automatic vehicle classification and weigh-in-motion data was collected at 18 sites for the Strategic Highway Research Program (SHRP). Automated pavement condition survey information was used to develop the department's resurfacing

program. The division prepared the 1992 Pavement and Service Ratings Book for Supplementary Highways.

The section also prepared an annual vehicle report for 1991. The report includes information on travel for Missouri's roads and streets. Through roadside interviews with motorists, MHTD gathered selected travel characteristics at 22 locations within the state. The information from these studies was used to determine needs and plan improvements for the locations.

Planning

Division

The mapping and drafting area of the Systems Support Section develops and publishes the official state map and county and city maps. It also prepares artwork and graphic displays for MHTD. The division produced 2.5 million copies of the 1991-'92 Official Highway Map.

Systems Inventory collects and maintains current and historical project data including roadway information and construction costs. Data regarding system mileage and log miles are also maintained.

Cities of more than 5,000 population received assistance in updating their functional classification and federal-aid systems. Information was compiled to update the National Highway Performance Monitoring System in urban areas.

Research to determine the resilience of subgrade soils to satisfy AASHTO guidelines will be extended, and new equipment will be purchased because AASHTO changed its specifications.

Research on the wearing surface of the Poplar Street Bridge will be continued since no lasting solution has been developed. Two studies are being conducted to determine the drainage and layer coefficients of granular surfaces. Research is in progress to evaluate the weight on the steel and concrete girder bridges in Missouri, develop improvements to two-lane highways and evaluate them in order if importance.

The Technology Transfer Assistance Program continued to link the sources of technology and the agencies that can make use of it. Through workshop instruction, guidesheets, videos and quarterly newsletters, the program has encouraged field use of technology. The cities and counties have become more aware of the available program, and a positive relationship continues to develop.

Additional workshops concerning highaccident location identification and correction were presented in the metropolitan areas. Construction training workshops addressed asphalt plant and road inspection.

The Finance Section projects income and expenditures for the department and maintains historical data. The section provided various estimates and projection for the 15-year plan,

which is funded by a 6-cent gasoline tax increase. Financial information is provided for cash management, legislative fiscal notes and various fiscal scenarios. Financial vehicle registration, fuel usage data and capital expenditures were provided to the Federal Highway Administration for inclusion in a national summary of highway statistics.

Public Affairs Division

The Public Affairs Division keeps Missouri
Highway and Transportation Department (MHTD)
employees and the public informed about department activities.
Public interest in highway and transportation matters continued at a high level during fiscal year '92, and the public Affairs Division responded by

Public Affairs Division responded by increasing the dissemination of information. To do this, the division used news releases, magazines, brochures, leaflets, fact sheets, videos, slide films, exhibits and displays, radio and television programs and public speaking engagements.

Public Affairs personnel keep in contact with the state's news media and routinely distribute information to the media.

During fiscal year 1992, the division prepared and distributed about 125 news releases. In addition, numerous special articles, feature stories and photographs were supplied to magazines, newspapers and other publications. July 1, 1989, the division contracted with an external statewide newspaper clipping service to keep officials informed of department coverage and comment. The division distributes copies of these clips to division and district offices.

The division often helped in the groundbreaking and formal opening ceremonies of major road and bridge projects. Division personnel developed speeches, brochures and the department's annual report.

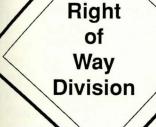
The division monthly published and distributed the "Missouri Highway and Trans-

portation News." The MHTD News is the department's employee newspaper with a circulation of about 10,500.

Per month, the division answered approximately 1,000 mail and telephone requests about maps, road information, routings, educational material and films.

The division supervised the distribution of more than one million highway maps, many of which were given out at the Missouri State Fair. Public Affairs personnel helped staff the annual fair exhibit in the Highway Gardens, a roadside park on the fairgrounds.

The department's technical and video library also continued to be housed in the division.



The Right of Way Division acquires realty rights for the construction and improvement of state highways and related facilities. It provides a relocation assistance and payment program for people displaced by land

acquisition. It also disposes right of way no longer needed for state highway purposes and assists the Chief Counsel's Office in preparing condemnation cases.

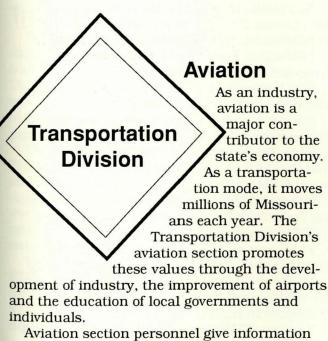
During fiscal year 1992, the cost of right of way acquired for highway construction totaled \$43,341,655.

The division acquired 927 parcels of land. This number includes 739 parcels acquired by negotiated settlement and 188 by condemnation, or 80 percent acquired by negotiation and 20 percent by condemnation.

Total payments of \$1,321,651.10 were made in fiscal year 1992 under the Relocation Assistance and Payment Program to help relocate displaced families and business and farm operations. During the fiscal year, 256 relocation claims were processed and paid.

During fiscal year 1992, the division obtained 1104 appraisals. Each month an average of 92 appraisals were produced. The division's total appraisals also includes 673 damage statements prepared on parcels with an estimated value of \$2,500 or less.

The sale of improvements located on right of way acquired for highway construction and excess property totaled \$922,611.49 during fiscal year 1992. And rental of airspace, excess property and property acquired for future construction equaled \$409,388.83.



Aviation section personnel give information or technical advice to airport sponsors and others who are interested in the establishment, improvement or promotion of aeronautical facilities.

The aviation section provides financial assistance to cities, towns, counties or airport authorities in the state through two grant programs. The capital improvement grant program gives financial assistance for planning and construction or expansion to sponsors of publicly owned airports. Funds under this

program are granted on a 80 percent state/20 percent local matching basis.

Under the airport maintenance program, funds may be granted to airport sponsors on a 80 percent state/20 percent local basis for maintenance on runways, taxiways and parking aprons. These programs are financed from the fuel tax applied to aviation gasoline and from general revenue appropriation.

A portion of the fuel tax revenue is used for the annual publishing and distribution of the Missouri Aeronautical Chart and Airport Directory. The aviation section published 13,000 copies of the chart/directory at a cost of \$6,831.

As a result of the Airline Deregulation Act of 1978, the aviation section monitors the small community essential air service program that is regulated by the Department of Transportation. A requirement of the act is that all actions affecting the air service to smaller communities must be coordinated with state aviation agencies.

During fiscal year 1992, the section performed 136 airport inspections and 186 obstruction evaluations; seven objections were filed.

Missouri has 352 airports and six seaplane bases. Of these, 143 facilities are open to the public, and 215 are for restricted use. There

are 5,475 registered aircraft and 12,565 registered pilots in the state. Eight airports provide scheduled air transportation and enplaned about 13 million passengers annually.

The aviation section received and processed 62 applications for financial assistance under the airport capital improvement, maintenance and block grant programs. The section expended \$231,210 on 11 capital improvement grants and #31,757 on five maintenance grants. Aviation's capital improvement grant program is an 18-month program. Consequently, data for this report is a combination of fiscal year 1991 and fiscal year 1992 projects.

In May 1989, the Federal Aviation Administration (FAA) selected Missouri, along with Illinois and North Carolina, to conduct a block grant demonstration program. Under this program, MHTD's aviation section will administer all federal airport improvement funds for airports that enplane less than 10,000 passengers per year. For federal fiscal year 1992, the aviation section received \$14 million in federal money. The section expended \$1,649,973 on 21 grants that were in progress during fiscal year 1992. The demonstration program extends through Sept. 30, 1996. The purpose of the program is for the states to administer the federal aid program for smaller airports for the FAA.

Third State Economic Development projects were in progress at seven Missouri airports during fiscal year 1992. A total of \$110,415 was expended for these projects.

The Missouri State Airport System Plan Update was submitted to the FAA for review and approval.

n 1990, the aviation section began obtaining aircraft activity counts at selected airports. The activity counts provide more accurate data for the Missouri State Airport System Plan. The counts are obtained by placing acoustic monitors near runways four times a year. The four counts are then calculated for an annual operations number for each airport. During fiscal year 1992 counts were obtained at 24 airports.

The aviation section is involved with the American Association of State Highway and Transportation Officials (AASHTO) Standing Committee on Aviation, National Association of State Aviation Officials (NASAO) Finance Committee, NASAO Strategic Planning Group, St. Louis Regional Commerce and Growth Association Aviation Committee, and the St. Louis Airspace Users Advisory Committee.

The section also monitors the Scott Air Force Base Joint Use Study.

Railroads

The railroad section provides, maintains and improves rail transportation within Missouri. The section administers rail planning programs, rail project implementation, the Amtrak 403(b) program and the railroad-highway grade crossing program.

In fiscal year 1992, the rail planning activities program carried out many different items including the following:

*railroad data collection to be included in the next scheduled Rail Plan Update;

*branch line abandonments:

*the monitoring and implementation of federal rail legislation;

*continuation/expansion of the Local Rail Freight Assistance program; and

*other general railroad matters.

The rail project implementation program involved three rail projects. They are as follows:

*5.5 miles, Green Hills Rural Development Inc., Locust Creek to Swan Lake Refuge — Rehabilitation work completed in June 1992.

*1.6 miles, Scott City Port Access Project — Excavation work in progress.

*21.7 miles, Columbia to Centralia — Rehabilitation work started in June 1992.

Missouri provides rail passenger service between St. Louis and Kansas City through the Amtrak 403(b) program. The "Ann Rutledge" and the "St. Louis/Kansas City Mules" trains are subsidized by a ratio of 65 percent state funding and 35 percent Amtrak funding. During fiscal year 1992, these two trains carried 174,740 passengers.

Passenger station improvement activities included providing for design and engineering costs for construction of an intermodal passenger transportation center for the St. Louis Metropolitan region.

The city of Hermann began daily Amtrak rail passenger service on Sept. 28, 1991. A passenger shelter was added in February 1992. This shelter was constructed through the efforts of Hermann at no cost to the state.

The Transportation Division is the communication link between the department and railroads for projects involving railroad-highway crossings.

Grade separation and at-grade crossings form the majority of projects administered by this division. Grade separation projects, such as highway bridges over railroads, involve

3:

personnel in the Chief Counsel's Office and several divisions including Planning, Right of Way, Bridge, Design and Construction. These divisions' efforts must be coordinated and communicated to the railroad to secure approval of plans and execution of agreements and easements. The Transportation Division is pursuing 27 projects improving or constructing highways over or under railroads.

The division is also responsible for coordinating and administering a program to improve atgrade highway/rail crossings throughout the state. This fiscal year Missouri obligated more than \$4.3 million of federal highway funds. These funds were matched by the Grade Crossing Account, State Grade Crossing Safety Fund and by the railroads. The funds pay for improving safety at or near highway/rail crossings. This funding aids the installation of flashing light signals with gates, state-of-the-art computer circuitry and high-type crossing surfaces if the crossing warrants.

Transit

The transit section assists in the planning, developing and operating of the state's public transit and specialized paratransit systems. This function is carried out through the administration of state and federal programs relating to general public transportation and specific programs for the elderly and handicapped.

The Missouri Elderly and Handicapped Transportation Assistance Program provided state financial assistance for 152 nonprofit organizations offering transportation services to the elderly and handicapped at below-cost rates. For fiscal year 1992, program appropriations were \$1,471,755.

The 10 area agencies on aging received \$795,002 in state funds to supplement federal funds for elderly transportation. An additional \$141,314 was available to 43 elderly organizations working with older Missourians.

State funds totaling \$436,089 were available to 99 sheltered workshops, group homes and other handicapped facilities to assist in transportation.

The department helped subsidize 3,856,702 special transportation trips. The total cost of these trips was \$9,971,755.

Thirty small urban and rural general public transit systems received financial and technical support from the department. Federal financial assistance is available under Section 18 of the Federal Transit Act, as amended, and

allocated to the various systems by the department.

he 30 small urban and rural systems had a combined operating budget of \$6,728,290; \$2,378,105 was provided by the department.

The systems operated 340 vehicles, logged 7,136,414 miles and provided about 2,243,478 trips.

Section 9 of the Federal Transit Act provides formula capital and operating assistance to transit systems in urban areas of more than 50,000 population. The department administers this program for Columbia, Springfield, St. Joseph and Joplin.

Capital assistance to nonprofit organizations and public entities giving transportation service to the elderly and persons with disabilities is provided by Section 16 of the Federal Transit Act of 1991. In fiscal 1992, the program provided \$1,206,197 in federal assistance. This was matched with \$301,549 in local funds to purchase 66 vehicles for 42 organizations, many of which were equipped with special equipment to insure compliance with the Americans with Disabilities Act of 1990.

There are 166 organizations operating 487 Section 16 vehicles statewide, providing more than 2,400,000 trips to eligible clients.

The Americans With Disabilities Act of 1990 has had an effect on the work load of the transit staff. Increased responsibilities include reviewing and certifying, on behalf of the state to Federal Transit Administration (FTA), the implementation of Complementary Paratransit Service for fixed route providers and insuring full compliance of vehicles and facilities for all other agencies funded through this department.

The transit section gave staff support for the Coordinating Council on Special Transportation. The council is reviewing special transportation plans statewide and will make recommendations based upon these plans. The council continues to investigate problems in the delivery of special transportation services in Missouri and recommend solutions to the governor and General Assembly.

Transit also administers the Rural Transportation Assistance Program — a training and technical assistance function funded by the FTA. Training courses offered include defensive driving, CPR and first aid, passenger assistance techniques and emergency procedures. Technical assistance is offered in the areas of vehicle procurement and maintenance. During the fiscal year 1991, there were 80 on-site

driver training programs offered involving about 1.050 drivers.

The transit section has made grant applications for national discretionary financial assistance under Section 3 of the Federal Transit Act. The first application was funded at \$2,555,550; the second application was funded at \$785,000, and the third one at \$5,117,000. Fourth and fifth applications are pending for funding at this time.

The first and second applications funded the purchase of 133 vehicles and other supporting equipment while the third application funded the construction of a park and ride facility.

The transit section has been funding the transit planning efforts of the Metropolitan Planning Organizations (MPO) in areas of more than 50,000. Recent changes in federal law now require the department to received federal Section 8 planning assistance and pass on these funds to the MPOs. Section 26(A)(2) of the Federal Transit Act may be used to fund special transit studies as well.

Waterways

Waterways provides technical assistance to Missouri port authorities in promoting private capital investment, in increasing the volume of commerce and in establishing a free trade zone within their port districts. Every city or county situated upon a navigable waterway may form a port authority. Fifteen port authorities have been formed along the Missouri and Mississippi rivers. The department is frequently contacted by interested communities concerning the port authority program.

Work continues statewide on seven port capital improvement projects that were funded during 1986, 1988, 1989, 1990 and 1991. When completed, the state will have invested more than \$2 million on these projects

In addition to providing technical assistance, funding was also provided to assist port authorities in the administration of their port development programs. During the year, \$277,950 in grants was expended by 13 port authorities. These funds are used by the recipients for managerial, engineering, legal, research, promotional, planning and other nonconstruction-related expenses.

Port development administrative grants

Howard/Cooper County Regional	\$ 24,514
Jefferson County	11,772
Kansas City	20,720
Lewis County-Canton	13,980
Marion County	18,775
Mississippi County	23,072
New Bourbon	39,750
New Madrid County	23,254
Pemiscot County	27,369
Southeast Missouri Regional	36,492
St. Joseph Regional	10,000
St. Louis City	13,420
St. Louis County	14,832
TOTAL	\$277,950

Statement of receipts and disbursements for fiscal year 1992

Highway	Receipt	Disbursements	
Basic Revenue:			
	\$175,901,473.95		
Dept. of Economic Development	2,149,299.59		
Motor Vehicle Use Tax	30,684,798.86		
Drivers License Fees	13,898,409.27		
Motor Vehicle Inspection Fees	2,353,865.50		
Motor Fuel Tax Receipts	304,503,937.20		
Vehicle Sales Tax Receipts	57,305,075.66		
Sub-Total	586,796,860.03		
Other Revenue:			
Misc. Escrow Fees	4,093,248.37		
Reciprocity Fund Interest	117,584.27		
Road Fund Interest	3,910,468.61		
Other Miscellaneous			
Sub-Total	18,935,596.42		
Sub-Total	27,056,897.67		
Federal Reimbursement:			
Federal Highway Administration	308,430,857.35		
Corps of Engineers	0.00		
Sub-Total	308,430,857.35		
Construction		509,058,736.73	
Maintenance		211,875,223.15	
Administration	A STATE OF THE STA	68,101,471.03	
Refund of Motor Fuel Tax		27,042,080.82	
Legal Expense Fund		270,000.00	
Highway Revenue Generating Fund		3,523,486.00	
O.A.S.I. (Highway)		12,535,683.35	
Other State Departments O.A.S.I.		5,074,053.84	
Other State Departments (From Hwy. F	und)	113,118,924.11	
TOTAL FOR HIGHWAY	922,284,615.05	950,599,659.03	
Transportation			
Administration		1,232,134.09	
Transit		7,453,237.05	
Rail		1,474,513.00	
Aviation		1,824,097.98	
Water		251,802.78	
General Revenue Fund	3,361,884.69	231,002.78	
Federal Fund	8,716,096.86		
State Transportation Fund	578,839.12		
Aviation Trust Fund			
Tividdolf Trast Falla	497,826.69		
TOTAL FOR TRANSPORTATION	13,154,647.36	12,235,784.90	
Mississippi River Parkway Commission	5,008.00	5,008.00	
Third State Building Trust Fund	3,594,944.31	3,594,944.31	
	939,039,214.72	966,435,396.24	

Our mission is to provide a quality transportation system that responds to Missourians' demands and enhances the state's growth and prosperity.



